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A FLYING VISIT TO SPITSBERGEN.

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THE record of a run across from Norway, and a visit of a few days to Spitsbergen last summer, hardly deserves to occupy space in the pages of this journal, inasmuch as the trip was made chiefly with the object of communicating with the depôt of the American Polar Expedition on Danes Island, and with little regard to zoological observation. The 'Saide,' R.Y.S., on board of which I was a guest of the late Captain Townley Parker, is an auxiliary steam yacht of 383 tons, 50 horse-power, iron frame-planked, but was in no way prepared for contact with ice. Four days' steaming from Bergen through the Norwegian fiörds, with their glorious scenery, brought us to Tromsøe, where we anchored on June 27th, in splendid weather. In the inner waters of the Norwegian coast we saw considerable numbers of Red-throated Divers, in full breeding plumage, sometimes in pairs, more frequently single birds. I noted between Bergen and Tromsøe *Larus marinus*, *L. fuscus*, *L. argentatus*, *L. canus*, *Rissa tridactyla*, *Sterna macrura*, *Mormon fratercula*, *Uria grylle*, and a few pairs of *Stercorarius crepidatus*. Eider Ducks were numerous at some stations. I once saw a solitary Eagle, and the impression left was the general poverty of bird-life in the fiörds. About sixty miles south of Tromsøe, the fiörd, which is very narrow, winds through a lovely, and, near the shore, well-cultivated country. Between latitudes 68° and 69° N. the shores are laid out in hay-fields; we saw neat farm-houses, churches, and pretty dwellings. The hill-sides in the back-ground are clad with foliage, chiefly birch. At

this date patches of snow lay here and there on the slopes, reminding us of what might otherwise have easily been forgotten, that we were in the same parallel as treeless Disco on the west coast of Greenland, and the frozen area of the Parry Archipelago. Here the surface temperature of the sea-water of the fiörd was 58° , that of the air 53° .* As soon as the anchor dropped, at 2 a.m., I went ashore, and made for the birch-woods that cover the small island on which the town of Tromsøe is built. It was a delightful morning, the sky clear and unclouded, with a breeze just sufficient to render walking in the woods not oppressive. The birch, the "lady of the woods," was then decked in tenderest green, and her million leaves trembled with gentle murmur to the breath of the south wind. The wild flowers grew in rich profusion in the meadows adjoining the sea-shore and in the dank vales that ran up to the birch-clad hills. Now and again the musical tinkle of a cattle-bell sounded, answered by the croak of the Ravens or the merry chatter of Magpies. I walked for several miles through the birch-woods before I fell in with a colony of nesting Fieldfares. I saw the birds at intervals flying over the trees with food in their bills. At length the harsh cries of these birds, darting about amongst the branches, showed me I was close to a colony, and I stood in a grove where some twenty nests were visible. Many of them contained young, which the parent birds were feeding, though they showed by their harsh screams that they did not approve of my being there; one nest had five fresh eggs in it. During my ramble I did not find a Redwing's nest.

I several times almost trod on males of the Willow Grouse, *Lagopus albus*; they arose at my feet with a loud cry, flew a short distance, and then settled with outspread wings, and commenced running about; this to allure me from the hen bird and young, which in one case I nearly stepped on. The anxiety of the mother was intense: scattering her young in the first place with her feet, she then ran round and round to gather them together; at times she crouched, with every feather upstanding, within a few paces of me, then dashed here and there and everywhere collecting her brood. I remained still until this was accomplished, and the parents had departed with their young. The male bird, in his white and orange-tawny plumage, is a fine-looking fellow. I found

* Temperatures recorded in Fahrenheit.



one nest from which most of the eggs had been hatched, but there were a couple left. I came across the nest of a Willow Wren with seven eggs much incubated; the inside lining was entirely composed of the white feathers of the Willow Grouse.

The Tromsøe Museum is well deserving of a visit. It contains most interesting collections from northern Norway, Finmark, Spitsbergen, Novaya Zemlya, and other parts of the Polar area. The Museum authorities have exercised a most wise discretion in limiting the collections to illustrate the Natural History, Zoology, and Geology of the far north.

The coaling of the yacht being completed by 4 a.m. of June 28th, we left Tromsøe under steam. The temperature of the water was 53°, and that of the air the same. Our course was through Gröt Sund, Kaag Sund, and to the open sea between the islands of Loppen and Arnøe; the latter, which I estimated at about 1200 feet, has stunted birch-woods growing half way up its sides. By mid-day we were well outside of the islands, meeting with a heavy, confused sea, which continued throughout the day; the temperature of the water was 47°. The weather, which had looked threatening for some hours past, now turned into a north-west gale with rain and fog, and the wind increased in strength till mid-day of June 29th, when the ship was hove to for a couple of hours. By 4 p.m., the sea having moderated, we proceeded under steam, the air temperature being 39°, that of the sea 40°. At 6 p.m. we got a good observation, which put our position to the eastward of Bear Island. The gale and current had drifted us sixty to seventy miles out of our course, which had been laid for the westward of Bear Island. We bore up to pass, if the ice we expected to meet with permitted, between Bear Island and the south cape of Spitsbergen. To our surprise we found the sea to the eastward of Bear Island entirely free from ice, I should think an unusual condition of affairs; indeed the only piece of ice we sighted was a small berg floating some sixty feet above water. At 3 a.m., June 30th, we sighted Bear Island, bearing west, and we sounded in 36 fathoms. Drizzling rain set in; the temperature of the air was 34°, that of the sea 40°. Towards mid-day the weather improved, and we passed through alternate areas of fog and bright sunshine; the sea had decreased to a long undulating swell. I noted during the day a single Pomatorhine Skua, many Kittiwakes, plenty of Brünnich's Guillemots, Black Guillemots, Glaucous Gulls,

Fulmars, and Little Auks. I noticed a pure white Brünnich's Guillemot* within twenty yards of the ship's side. At 4 p.m. the south cape of Spitsbergen came into view, bearing N.W. by N., some twenty miles off; the temperature of the air was 34° , of the sea 38° . The weather being very fine we hauled in nearer the land, and steamed northward with the bold mountainous coast of Spitsbergen on our starboard.

By mid-day of July 1st every cloud and wreath of mist had disappeared from sea and land, and the peaked mountains and ice-fields and glaciers stood forth in all their grandeur and glory. In the finest of Arctic summer weather we steered into the estuary of Ice Fiörd. The temperature in the shade was 47° , in the sun 61° , of the sea 39° ; except for our surroundings of snow-clad peaks and vast glaciers descending to the sea on the north side of the fiörd, we could scarce believe that we were in Polar regions. As we proceeded up the fiörd we could see from the foreyard that the pack-ice stretched continuously from Cape Boheman to Hyperite Hat, but the entrance to Advent Bay was clear. I was surprised to see what a long extent of the foreground on the south side of the fiörd was bare of snow, and even up to a height of a thousand feet the mountain slopes were mostly clear.

Animal life was fairly abundant in the fiörd. Thousands of Little Auks and Guillemots floated on the waters, or might be seen high overhead winging their way in flocks to their breeding haunts; the northern Dovekie and Puffin were far less numerous. Now and then a Seal popped its head above water, and one small Whale showed itself close to the bows of the ship. When we reached the entrance of Advent Bay, an inlet on the south side of the great Ice Fiörd, the scene was enchanting. The bay, full of fragments of floe and berg, glistening under the bright sunshine, the sea without a ripple, and the ship gliding to her anchorage between the loose pieces of ice formed a delightful picture. The position we anchored in was that surveyed and charted by Mr. Lamont,† and is by far the best anchorage in Advent Bay. A ship of large size can find ample depth and security close to the abruptly sloping shingly beach. Immediately

* I procured a similar albino example of this species from West Greenland, which is now in the British Museum.

† 'Yachting in the Arctic Seas,' 1876. Appendix I.

after the anchor was let go, at 6 p.m., several of us went on shore. Some of the party proceeded along the south side of Advent Bay; I and a sailor to the south-west along the shore of Ice Fiörd. I searched the slopes of the hills for Ptarmigan, but only found their feathers, droppings, and dusting places. Seeing a Reindeer moving below us to the westward and following the shore-line, we went in pursuit. As we walked along an endless procession of Fulmars accompanied us. They were heading the same way as ourselves, evidently bound for a roosting place, but avoiding the sea they passed along the foreshore between the slope of the hills and the water. Hundreds of these birds passed close overhead and on each side. They showed no fear, many sailing past within ten feet of us. Raising a rifle or shouting only made them sheer off a little, with a slight shudder of the wings and a blink of the eyelid over their lustrous black eyes. I had never before seen a vast body of Fulmars deliberately leave the water and take to a passage overland. In the most northern latitudes, and when the sun is at its highest altitude, in June and July, I have noticed some slight appreciation by birds of the hour which in lower latitudes would be midnight. They are silent for a short time, they seek their resting places or cover their eggs; but the period of repose is brief, and long before the sun has passed from the northern to the eastern quarter of the sky they are again in activity. Nevertheless there is an indefinable something in the surroundings which tells the traveller, without reference to his watch, that the hour which should be midnight is at hand.

We found the Reindeer about Advent Bay so tame, that I presumed we were the first who had invaded their haunts that season, and recollections of previous onslaughts had faded. Following the track of the Reindeer which we had seen, led us to a valley that opens on to the shore of the fiörd some six miles from our anchorage. Seeing a Reindeer feeding on the slopes of the glen we stalked it. This involved crossing a rushing torrent of icy cold water up to our waists. Crawling and creeping, I got within eighty yards of where I supposed the animal to be, and, cautiously peeping over the knoll, saw the deer feeding. As its stern was towards me, I gave a low whistle, in the hope that the animal would turn and give a side shot. It turned, and to my surprise, instead of making off, walked up to me with head elevated sniffing the air. I shot the poor creature within a few

yards of me. The death of the Reindeer was the signal for all the Glaucous Gulls in the valley to congregate around us. Like Vultures in the tropics, they assembled from each side of the glen, and the *gralloch* was hardly removed from the quarry before fifty of these great white gulls were tearing and fighting over it. On running up from where I fired to where the deer fell, I nearly put my foot on a Purple Sandpiper, which bustled off her nest and four eggs. Putting my cap over them, I returned shortly to pick them up, and the Sandpiper was running round and round within a few feet of my cap, but on seeing me crouched and made off, like a mouse, amidst the short herbage. The nest was a slight depression lined with moss and a few dried leaves. Three more Reindeer were seen further up the glen, and they allowed me to approach so near that I shot another with hardly the pretence of a stalk. It seemed so cruel to shoot these confiding animals that I made up my mind not to do it again, and I kept to this resolution. My companion and I had hard work dragging the carcasses of the two deer to the sea-shore; our strength would not allow of carrying them another six miles to the ship. On sending for them the next day only their skeletons and hides were found; the Glaucous Gulls had picked them to the bone. The experience of my shipmate, Colonel Bond, who went out after Reindeer in another direction at the same time as I did, was very similar to my own. Meeting with a buck and two does, he shot the former; the latter, instead of making off, came within three yards and smelt at him. Like a good sportsman, his rifle was likewise returned to its case, and the animals required for the ship's larder were shot by the sailors.

During July 2nd, Bond and I went in the steam-launch towards the head of Advent Bay. The water there is so shallow we could not get within half a mile of the muddy shore in the launch, but we landed from a light skiff we had in tow. Our object was to visit the small lake mentioned by Mr. Lamont as the place where he met with both Brent and Bernacle Geese. It seems to me very unlikely that so experienced a sportsman and good field-naturalist could by any possibility be mistaken in his identification of these two species. I quote his words: *—
“There is a pond a little in-shore at the end of Advent Bay, and

* *Op. cit.* pp. 284, 285.

about it were large flocks of Brent and Bernacle Geese. The latter were moulting, and therefore not able to fly, but they were able to run like hares. I however got a hundred by concealing myself in one direction while I sent round a man to drive them from another. The flesh of the latter is coarse and ill-flavoured compared with the more delicate meat of the Brent Goose." On getting within sight of this piece of water I scanned it very carefully with my glasses: there were some fifty Brents on it, and some Eiders, but no Bernacle. Bond hid up on the sand-spit which separates the lake from the bay, and I went round and drove the geese over him. He killed three Brents out of the flock, and as they passed close to him he was able to corroborate my view that all were *Bernicla brenta*. Our experience in no way shakes my confidence in the correctness of Mr. Lamont's identification. It was two weeks later in July when he met with the Bernacle Geese at this place, and it was July 22nd when Mr. Eaton obtained them on a small lake inland from Wiide Bay. Probably it will be found that the Bernacle Geese in Spitsbergen, like the Pink-footed, nest inland, and bring down their goslings to the sea-side lakes in the summer. Ascending to some little height, I noticed that a broad and level valley, at this time of the year much bared of snow, with a series of lakelets in it, extends for several miles from the head of Advent Bay. It looked a likely stretch of country to investigate, and much did I regret that there was not time to explore it. I hope it may receive attention at some future period. Near the lake a pair of King Eiders, the male in adult plumage, passed me; I secured the female, and on our return by water to the yacht, we shot two more *Somateria spectabilis*, and several common Eiders and Dovekies. We also noticed the first Ivory Gull.

On July 3rd we left Advent Bay, and anchored on the west side of Green Harbour. About a mile and a half north of this anchorage the land near the shore is low, and there are two shallow pools of water not far from the beach. There we came across two pairs of Grey Phalarope. This bird has a very pretty habit—which I have noticed as well in other parts of the far north—of standing in shallow water, and with its wings raised and meeting above the back, skipping and flickering when taking its bath. The Grey Phalarope in breeding plumage is a lovely bird, and its bright garb seems quite out of place with the surroundings

of snow. No other bird in the Polar Regions can compare with it in richness of colour. We were fortunate enough to find a nest, a mere depression in the turf containing two eggs. The male bird was on the nest. We proceeded after this in the steam-launch to the extreme head of Green Harbour, a distance of some seven miles, and landing, visited a most interesting glacier. A single Buffon's Skua was seen and shot there. Hundreds of Kittiwakes and Glaucous Gulls were gathered together on the sands and blocks of ice at the head of this bay, and a few Arctic Terns and Ivory Gulls with them.

The next day I was ashore early. The temperature on the fell marked 50° ; it felt very warm. I came across eight Pink-footed Geese feeding near the shore; I was within eighty yards of them. When they arose six flew away to the other side of Green Harbour, and one pair took to the fell. Following them up, I again disturbed them, but instead of leaving, they sailed round in a great circle, now and again alighting on a hillock or spot of rising ground. From their actions it was easy to judge their nest or young were not far off. I had not time to continue the search. Near a morass I picked up the withered wings of a wading bird, which I afterwards submitted to Professor Newton, who gave me the following opinion:—"The withered wings which you found in Green Harbour seem, after comparison, to be those of *Tringa alpina*, of medium size, *i. e.*, neither *T. schinzi (vera)* nor *T. americana*; but I would not swear to their identity." I think, however, we may, without much scruple, include the Dunlin, *Tringa alpina*, as a straggler to Spitsbergen.

We left Ice Fiörd, on our way north to Danes Island, on July 5th. At 3 p.m. of that day we were about the approximate position of Goshawk Rock, which is charted as twenty feet above water. No such rock appears above the surface in fine weather, and it is probably a hidden danger, to be carefully avoided. As the sea was quite smooth and the weather fine, we got into the dingey and took a series of soundings. About two or three miles from where the yacht lay was a low island close inshore of Prince Charles Foreland, and bearing south-east of Goshawk Rock of the chart. We pulled to this skerry, which is a low island of schistose rock about 50 acres in extent. We landed after some little trouble, for even in this calm weather the swell broke heavily on the rocks. On scrambling up we found the centre of the islet

more depressed than its edges, and covered by a saturated moss, in which lies a small tarn of fresh water. Being some distance from land and surrounded by open water, this islet offers a safe asylum to the Eider Ducks and Brent Geese. I never saw a limited area more thronged with Eider fowl than this was. I calculated that on our first landing the skerry must have been occupied by more than five hundred pairs of Eiders and some twenty pairs of Brent Geese. The Eiders (all *Somateria mollissima*) were nesting in colonies, and so tame that we had almost to push the ducks off their nests. Overhead floated several pairs of Skuas (*S. crepidatus*), and these insolent marauders flew to the nests, when uncovered by the owner, and scrambled for possession of her eggs with us. We had to poke at them with the barrels of our guns to drive them off, but they secured several and sucked them at our feet. A pair of Red-throated Divers had their nest, with one egg in it, by the side of the tarn. We only found two nests of *Bernicla brenta*; each contained three eggs, and the owners were very unwilling to leave them. These eggs were embedded in a soft mass of grey down. Arctic Terns screamed overhead, and we found one or two of their nests and eggs. A few pairs of Purple Sandpipers seemed to be breeding. As fresh meat was required on the yacht, several of the Eider Ducks were shot, but we had to be careful in gathering them up at once, for if left on the ground, and we moved on fifty yards, they were immediately torn to pieces and devoured by the Glaucous Gulls. In the midst of the confusion arising from the attack on the ducks, a fine Snowy Owl rose from the highest spot of the skerry and sailed over our heads. The two men from the dingey joined us, and helped us to carry our burdens to the boat. We returned to the ship with thirty Eiders and one hundred and sixty of their eggs, which were nearly all quite fresh. These birds and eggs were highly appreciated. The northern Puffin, *Mormon glacialis*, was swimming in numbers near the skerry; it struck me as looking decidedly larger when on the wing than *M. fratercula*. These birds carry away a great quantity of lead, and are somewhat difficult to secure in the sea, for even when shot through the head they are well able to dive.

The Snowy Owl has hitherto been recorded as a very rare species from Spitsbergen. Professor Newton and Dr. Malmgren mention one being shot on a piece of floating ice between Verlegen

Hook and Shoal Point in July, 1861. Dr. Theel records a second example from Mossel Bay. In the neighbourhood of Advent Bay, on July 2nd, I came across a low mound, which was undoubtedly used as a resting-place by this species. Many of its unmistakable feathers lay about, and numerous castings, which proved to consist entirely of the remains of the Little Auk.

The same day Colonel Bond, on the shore of Advent Bay, saw a Snowy Owl, which rose from the ground close to him. He was after Reindeer at the time, and having only a rifle could not secure it. On July 5th, as already mentioned, we observed a fine Snowy Owl on the small island that lies off the west side of Prince Charles Foreland, approximately in lat. $78^{\circ} 22' N$. Skipper Olsen, of the 'Familien,' whom we met in Smeerenburg Bay, gave me the skin of one, which he had shot at Welcome Point, lat. $79^{\circ} 50' N$., on July 1st. Capt. H. C. Johannesen brought to the yacht, on July 8th, another, which had been shot a few hours previously on Amsterdam Island. This was a female, and one of the fattest birds I ever dissected. This bird had evidently been sitting, for its breast was quite bare, and showed signs of incubation. The stomach contained remains of *Mergulus alle*. In our brief visit to Spitsbergen we obtained two specimens, saw two more, and found traces of them. I had, prior to my visit, accounted for the rarity of the Snowy Owl by the entire absence of the Lemming from Spitsbergen, for in Grinnell Land and Novaya Zemlya, where the Snowy Owl is abundant in summer, so also is the Lemming. As, however, the bird appears to be able to live well in Spitsbergen on the Little Auks, which doubtless it can procure at their breeding haunts in any number, this line of reasoning does not hold good. Is it possible that the Snowy Owl has only of late years discovered the capabilities of the Auk-fells of Spitsbergen? If such be the case, we may expect to find this bird increasing yearly in numbers in Spitsbergen, and this will be an interesting point for future observers to determine.

I do not find in my journal of the cruise any further notes of zoological interest connected with Spitsbergen. After communicating with the depôt of the American Polar Expedition on Danes Island, where we found Professor A. Oyen, of Christiania, in charge, and taking a mail for Europe on board, we returned to Tromsø, which we reached on July 12th.

NOTES ON THE SEAL AND WHALE FISHERY, 1894.

BY THOMAS SOUTHWELL, F.Z.S.

I MENTIONED last year some of the vicissitudes of Newfoundland Sealing, showing how much depends upon a right judgment as to the position of the drifting pack on which the Seals would be found, and that not all the long experience of those who year after year have studied the uncertain movements of the ice, carrying with it the breeding Seals, can do more than form an approximate estimate of their whereabouts; and even then unlooked-for changes in the force or direction of the wind, or in the intensity of the frost, may frustrate all their wisely-laid plans. This was fully exemplified in the past season.

The reports state that the spring of 1894 was a very stormy one, and that the ice was in consequence in constant motion, and difficult to navigate, thus often rendering the breeding Seals unapproachable.

When the steamers sailed on March 10th the ice was somewhat off the land, and all of them, with the exception of the 'Hope,' kept outside; as the Seals whelped on the inside of the ice, the 'Hope' struck them at once just to the N.E. of Cape St. John; but two days afterwards, a N.E. gale coming on, they all drifted into Green Bay, where they remained until the beginning of April, when the 'Hope' returned with 16,499 Seals, the largest number obtained by any one vessel of the 22 steamers. The other steamers could not get amongst the Seals; two or three of them, however, contrived to do fairly well, but the rest did very little on that part of the coast, and no old Seals to speak of were got later in the season. The 'Algerine' killed 10,719 young Harp Seals in the Straits of Belleisle, and the 'Labrador' took some 2400 young Hooded Seals off Cape Anguille, and the remainder of her cargo further to the westward. Whilst butting through the ice she had the misfortune to lose two men; one poor fellow fell through the ice under her bows, and a companion, coming to his assistance, also lost his footing; the vessel, at the same time steaming ahead, crushed both of them; one sank, but the body of the other was recovered. The shore-fishery by landmen and schooners was very successful, and probably 150,000 Seals were thus taken.

Of the 22 steamers, one, the 'Newfoundland,' landed about

6012 Seals at Halifax. We have therefore to deal with only 21; these captured a total of 152,821 Seals old and young, the 'Hope' heading the list with 16,499, followed by the 'Diana' with 15,122; only two other vessels had over 10,000, the average of the 21 being 7277, an improvement upon the previous season, which averaged only 5866; but still far from a paying cargo.

The Greenland sealing was again very unimportant, only 4712 being brought home by three vessels. In addition to this a vessel called the 'Alert,' which acts as a carrier sailing from Peterhead to Cumberland Gulf with stores for Mr. Noble's station there, and returning with produce, brought home 7000 skins, making a total import of 11,712 from the northern fishery; added to these, 13,458 from Newfoundland gives a total of 25,170 Seals taken by six Scotch vessels (including the 'Active'), producing 269 tons of oil, which at £17 per ton, and skins at, say, 4s. each, represents a sum of £9607, as compared with a like valuation of £9915 in the previous season.

The year 1894 marks a new era in the declining history of the British Whale fishery. For the first time since the year 1788, Peterhead, which port has in its palmy days sent as many as 29 ships to the Arctic Seas, has been totally unrepresented in either the Greenland or Davis Straits fishery, except by the small carrier already mentioned, in the employ of the station in Cumberland Gulf. The last Peterhead vessel, the 'Windward,' which Capt. David Gray commanded in 1893, has been sold to the Jackson-Harmsworth Expedition, and, should her commander have been successful so far in his arduous undertaking, is now wintering somewhere in the neighbourhood of Franz Josef Land. Dundee sent out only eight vessels, and, should report prove true, it is probable that three or even four of these will be laid up next season. Present prices are so low, and the produce, even when obtained, so difficult to dispose of, that there is little inducement to continue the fishing. It seems not unlikely also that the present financial crisis in Newfoundland may have the effect of materially reducing the number of the sealing fleet which will leave the ports of that colony in the spring.

The three vessels which sailed from Dundee last season for the Greenland fishery were the 'Active,' the 'Diana,' and the 'Polar Star.' The first captured two small Right Whales,

yielding only 20 tons of oil and $15\frac{1}{2}$ cwt. of bone; the second, one Whale, with 8 tons of oil and 4 cwt. of bone; and the third, one Whale, of 10 tons of oil and $7\frac{1}{2}$ cwt. of bone;—a miserable return compared with the captures at the Straits fishery, which averaged over 16 cwt. of bone each; and this deficiency was not made up by the sealing, which was equally bad. Most of the Whales taken of late years in the Greenland Seas have been very young animals. Experts are therefore of opinion that there must be breeding Whales there, although they cannot succeed in finding them. It may be that the older Whales have become extremely wary, and that it is only the young and inexperienced which expose themselves to capture.

Five vessels fished in Davis Straits, killing 15 Whales and 1261 White Whales. Of these the most successful was the 'Eclipse,' which returned with five fair-sized Whales, yielding 95 cwt. of bone; the 'Terra Nova' had also five Whales, producing 70 cwt. of bone; the 'Nova Zembla' four; the 'Balæna' one Whale and 820 White Whales; the 'Esquimaux' had to be content with 432 White Whales only. All the vessels experienced very bad weather early in the season, which so delayed them that the majority of the fleet missed the "spring fishing," and there was much weary waiting before they were rewarded by a capture. At the end of 30 days the 'Nova Zembla' was only 500 miles from home.

Capt. Guy describes the summer as one of the worst he had ever experienced, extremely cold, foggy, and gales of wind of almost daily occurrence. On July 8th, being beset in the "fast" ice, the vessel had a very narrow escape of being crushed; a huge iceberg was observed approaching, from which there appeared to be no way of escape, and all prepared to leave the ship. Down came the iceberg, the lower edge of which caught the ship's quarter; such, however, was her strength that, instead of the vessel being crushed as was expected, she heeled over on her broadside, and, after being in that position for about four hours, the iceberg sheared off, and she righted, to the relief of her officers and crew, whose anxiety was intense. It was not till Aug. 23rd that Capt. Guy killed his first Whale, and three others were secured at short intervals during the next few weeks. On Oct. 1st the 'Nova Zembla' bore up for home, and had a splendid run of 14 days.

The 'Terra Nova' had a curious experience. About 45 miles off Martin's Mountains, the southern point of Lancaster Sound, Capt. M'Kay killed his first Whale, a very large animal with 12 ft. bone. When cutting it up an old harpoon was found embedded in its blubber, which bore the name of the whaler 'Jean,' of Bo'ness, and was dated 40 years back. This vessel was lost in the ice 37 years ago, and the finding of the relic excited a considerable amount of interest. The steel is said to have been as bright as the day it was made, and the Whale seemed to have sustained no injury from it.

The 'Balæna' killed her only Whale on Sept. 23rd; a fair number had been seen, but it was not until that date that they were enabled to effect a capture. In Elwin Bay, Prince Regent's Inlet, they killed 820 White Whales in the month of August. Capt. Fairweather reports a ghastly discovery in this locality. Three vessels were cruising in concert, looking for White Whales, when Mr. Fairweather, jun., being on shore with a seaman, observed three corpses lying together not far from the shore, and "a slight scrutiny revealed the fact that a party had died of starvation. It was evident that the group, two men and a woman, had resorted to cannibalism before death intervened to end their sufferings. . . Lying scattered about in the vicinity were a number of human bones, skulls, &c. . . It is supposed the dead Esquimaux were natives of Lancaster Sound, who had travelled across the ice in search of depôts of stores left by old navigators." A large number of relics, the property of these poor people, were brought away, amongst which was a telescope engraved "Feathers, Dundee." Capt. Fairweather states that a number of years ago, when in command of the 'Thetis,' he presented a similar telescope to an Esquimaux, and he is of opinion that the instrument discovered by his crew is the same.

The total produce of the Whale fishery was 20 Right Whales, 1261 White Whales, and 49 Walrus; these yielded 412 tons of oil and 14 tons 7 cwt. of bone. The former may be valued at £17 per ton, or £7004; and the latter, allowing for under-size bone (£1500 per ton for the former, and £750 for the latter, about 10 per cent. of the whole), at a sum of £20,448, or a total of £27,452, as against a like valuation of £41,449 in the previous season.

The British vessels have not repeated the experiment of a

visit to the Antarctic Seas, but the Norwegians were more persistent, prosecuting the sealing there with vigour, laying up their vessels at the Falkland Islands, and employing a carrier to bring home their produce. This vessel, on her return after last season's fishing, was wrecked on the Goodwin Sands, the salvage realising very little; and the Norwegian ships, I am informed, do not intend to continue the enterprise in that direction,—fortunately for the southern Seals, which would otherwise have been quickly exterminated.

I have, as on former occasions, to express my indebtedness to Mr. David Bruce and Mr. R. Kinnes, of Dundee; to Capt. David Gray, of Peterhead; and Mr. Michael Thorburn, of St. John's, Newfoundland, for their kindness in supplying me with information.

ORNITHOLOGICAL NOTES FROM NORFOLK.

BY J. H. GURNEY, F.L.S.

THE following notes for 1894, as will be seen, have been chiefly collected from the observations of others, and I have been careful in every case to specify the source of the information. We have so many good naturalists in Norfolk, that there is seldom any need to personally verify the reported occurrence of rare species.

JANUARY.

8th. A Black Guillemot and a female Eider at Hunstanton (J. G. Tuck, Zool. p. 64).

13th. About this date a Scaup was shot on the river at Dunston, four miles south of Norwich. This is some way inland, but at the beginning of the month a good many of these birds appeared at Blakeney and other places on the coast, and I received one alive, but it soon died. Others were shot, being tamed by the very severe weather. The 4th was the coldest day experienced in Norfolk for twenty-seven years, but on the 10th the frost broke up.

FEBRUARY.

1st. A female Great Bustard was shot at Costessey, near Norwich, by a man named Paul, of which a full account has been given by Mr. T. E. Gunn (Trans. Norfolk Nat. Soc. v. p. 656). Its gizzard contained an angular flake of flint (which must have been

an awkward morsel to swallow) and three small pieces of pottery, one of a blue colour, recalling to mind New Zealand Moa stones (see the coloured figure in 'The Ornithological Miscellany,' vol. iii. p. 240), which were sometimes of a bluish hue. The last occurrence of the Great Bustard was on Jan. 19th, 1891, when six others were killed in different parts of England, and, like this one, were all females.

4th. Signs of spring. My Eagle Owls both received their master with many loud snaps, which always indicates the nesting impulse, and both sexes scrape holes the first fine spell of weather which comes after January. This snapping noise is caused by the withdrawal, not the meeting, of the mandibles, but the action is so rapid that it is very difficult for the eye to follow it. The 24th of March is about the time these Owls usually lay their first egg, and incubation lasts about thirty-six days, the old bird beginning to sit directly the first egg is laid. On a fine day she will leave her young ones, when about a week old, to the warmth of the sun, but will run along the ground to them if anybody goes into the cage. She is so savage at this time that the intruder will stand a very good chance of getting a blow on the head or neck from those sharp talons. My father reared a good many Eagle Owls, but his success was as nothing compared with that of Mr. Meade Waldo, who reared ninety from one female bird.

10th. The White-shouldered Eagles, *Aquila adalberti*, Brehm, brought from Spain in 1872 by Lord Lilford, and given by him to my father, being supplied with boughs, for the first time made a nest, but no eggs were laid. They are fond of eating those of other birds when given to them.

MARCH.

This month was fine, warm, and dry. On the 4th two vinous-breasted Rock Pipits, of Scandinavian origin (*Anthus rupestris*, Nils.), both males, were shot at Cley by Mr. E. Ramm. This well-marked race never occurs on our coast in any month except March, at which time, like the Black Redstart to be next mentioned, it migrates eastwards, towards Denmark.

23rd. A Black Redstart at Framingham; during this month Black Redstarts were also seen at Yarmouth, and others were reported in South Yorkshire and in Kent.

APRIL.

11th. A Spoonbill, *Platalea leucorodia*, was seen at Hickling.

13th. The Rev. M. Bird saw three Garganey (two ducks and a good drake) in the Broad district; and on the 17th he saw a Jack Snipe and found two Shovellers' nests; and a few days afterwards Mr. Southwell saw several Shovellers at Hoveton "broad."

25th. A White Wagtail, *Motacilla alba*, caught at Lound and taken alive to Mr. W. Lowne, had the pearl-grey colour of the back continued to the rump, as in the three previous Yarmouth specimens. It was in very good health when I saw it alive in July.

MAY.

At Scoulton Mere I found that the gathering of eggs of the Black-headed Gull had ceased on the 9th, the take having been about 7200 eggs, a much larger number than was obtained in the dry spring of 1893, or in 1892, but less than half what used to be collected when I first remember these Gulls nearly thirty-five years ago. The price is now a shilling a dozen eggs, and they are eagerly snapped up in small quantities at that figure, none coming to Norwich market from Scoulton in 1894, though there were some there on April 25th from another quarter.

12th. Ten Shelducks were seen at Horsey by Mr. Bird, who on the same day found nine Kestrel's eggs in one nest, which was on the ground at Ruston. Both the number and the situation are unusual. A Spoonbill appeared on Breydon (A. Patterson), and eight Dotterel, *Eudromius morinellus*, at Winterton (Bird).

14th. Four more Dotterel at Fakenham (G. Davey).

15th. Chiffchaff's nest at Keswick.

17th. A pair of Black Terns were seen by my son over Keswick mill-pond.

21st. My son put a Blackbird off her nest of five eggs, two of which were spotless, and two almost spotless, the fifth being very pale but otherwise typical.

25th. Received a Short-eared Owl from near Bury, a pale-coloured one, which is generally the case with those obtained in summer.

29th. Three Crossbills at Blakeney (H. Pashley).

JUNE.

19th. Received a Hawfinch from Bury, which Mr. W. H. Tuck thinks had been hatched about the middle of April, the time they begin to pair according to Yarrell. I protect Hawfinches, and am rewarded by their eating my white-heart cherries, to which I object, and yew berries, to which they are welcome. At Wiveton Mr. Pashley tells me they stripped three large rows of peas in one night, throwing many of them on the ground in mere wantonness. When recording the two Little Bitterns at Rollesby Broad last year (Zool. 1894, p. 88), I was not then aware that there was also another on a small lake near Watton, thirty-two miles west. More fortunate than its relatives, it was carefully protected, and the owner was rewarded by the same or another returning, about May 21st, to spend the summer on his water. Invited to come and hear its curious note, I acquiesced in its resemblance to the sound made by a paviour ramming stones, or the distant barking of a dog. Nothing would induce it to rise. On coming home and contemplating a young one in a cage at Keswick, and noticing the extraordinary drawn-up thinness of it (exactly like Mr. Griffith's picture (Zool. 1894), except that its neck was often even more contracted in breadth, while in length elongated to its utmost), and its immovability, and resemblance to faded rushes, I can well understand that it might be within a few feet and yet be invisible. Mr. Griffith's photograph, though very good, does not show the peculiarity of the legs. The tarsi are sometimes at different angles, and the feet point in different directions, without incommoding the Bittern in the least. By the end of June it was clear to the owner of the lake that there were two Little Bitterns, unless they are marvellous ventriloquists, for one "barked" on one side of the mere, and one on the other. On the morning of July 25th Mr. P. reported that after a heavy rain one of them sat on the top of the Ducks' enclosure, sunning himself and "barking" for ten minutes. I did my best to stimulate search, and a nest of some kind was found, but its ownership was not proved, and no eggs were laid. By the 22nd of August the birds had gone.

28th. A new colony of about thirty Herons' nests was noted at Reedham (W. H. Hudson). A fully-fledged Hawfinch was caught at Beeston Regis (T. W. Cremer), and a male Crossbill

was shot at Cromer, where a pair of these birds appeared in a large garden in the town, with four young ones able to fly, but probably bred in the woods near. I soon afterwards heard from Mr. R. Clarke that several flocks of Crossbills had been seen in the neighbourhood of Sandringham, and Mr. Cordeaux noted some in the Humber district ('Naturalist,' 1895, p. 2). In the autumn they again appeared near Swaffham, and I think they are becoming much commoner than formerly.

JULY.

13th. A Short-eared Owl was caught alive at Framingham Pigot, near Norwich, and was afterwards sent me by Mr. S. Bligh. From its rich colour and the down between the ear-tufts it was apparently a young bird.

18th. A Homing Pigeon of my son's, liberated at Lowestoft, flew to Keswick in fifty minutes; a good record.

19th. A Curlew at Keswick.

31st. Seven Grey Crows were seen at Yarmouth by Mr. Patterson. They are not often met with at this time of the year.

AUGUST.

2nd. Two Wood Sandpipers seen at Hickling (Bird).

20th. Two Wigeon seen at Hickling (Bird).

22nd. A Garganey was shot near Lynn by Mr. Cresswell.

25th. A pale variety of the Redshank was shot at Cley by Mr. Gunn, who also saw a very pale-coloured Curlew, at first reported to be a white one; and later on a white Woodcock was seen by the keepers at Horsford.

SEPTEMBER.

10th. An immature female Barred Warbler, *Sylvia nisoria*, was shot at Cley by Mr. W. H. Connop. It had the under tail coverts a good deal barred, and the wing coverts edged a little with white. Six years ago one of these birds was shot, on the same date, at the same place; and on this occasion one had been shot only seven days before, in Yorkshire.

18th. A female Alpine Ring Ouzel was shot on the beach at Cley by Mr. T. E. Gunn, answering to the description of *Turdus alpestris* in Dresser's 'Birds of Europe,' where there are four figures given of this southern variety (vol. ii. p. 113; supp. p. 653).

21st. Mr. Patterson noticed and for some time watched a

bird which from his description must have been an Alpine Accentor, near Yarmouth.

25th. Mr. Patterson found floating upon the river Bure a three-bushel sack which proved to be crammed full of dead *Black-headed Gulls*, in fact nearly 100 of them, and most of them minus their wings. Many a visitor to our "Broads" is deprived of pleasure by such thoughtless and selfish destruction as this.

27th. The first Lapland Bunting was seen at Yarmouth (G. Smith), four days later than the first seen last year.

28th. A Fulmar Petrel at Cley (Pashley).

OCTOBER.

1st. A Kentish Plover at Yarmouth (Patterson), and a Yellow-browed Warbler at Cley. The latter was shot by a labouring man who only wished to empty his gun, and little thought he was firing at the first Norfolk example of *Phylloscopus superciliosus*. It has the stripe on the crown very faint, and is probably a young bird. Three were shot on the 8th, 13th, and 15th, in South Yorkshire, probably a part of the same migratory flock, which indeed reached to Italy, where, as I learn from the Rev. H. A. Macpherson, one was killed between Nice and Genoa about the third week in October. The head stripe is scarcely perceptible in one of the Beverley trio, which, through the intervention of Mr. F. Boyes, I obtained from Mr. George Swailes. Eleven examples of the Yellow-browed Warbler have now been met with in the British Isles, two of which have not been recorded, though obtained twenty-seven years ago. These were shot by Mr. J. H. Jenkinson and Mr. Pechell on the Scilly Islands, October, 1867, the same month which produced one at Cheltenham, and were thought to be only young Firecrests (cf. 'Birds of Cornwall,' p. 249). One of Mr. Swaile's birds was exhibited by Mr. Harting to the British Ornithologists' Club, and he has commented on this, and on its recent occurrence in Norfolk (Zool. 1894, p. 459). With the Yellow-browed Warbler the Norfolk register is brought up to 298, to which Dr. Sharpe now tells us we may add Holböll's Redpoll ('British Birds,' i. p. 47). Three days afterwards another bird, nearly as rare, namely, a young Red-breasted Flycatcher, *Muscicapa parva*, was shot at Cley by Mr. G. E. Power. Perhaps the next novelty to be found at this favoured seaside spot will be the Crested Titmouse. No Blue-

throats were seen there, and, so far as I know, none were announced on any part of the east coast of England during 1894.

9th. A young male White-eyed Duck, *Fuligula nyroca*, was shot at Yarmouth (G. Smith).

13th. Received a pair of Gadwalls from a mere in West Norfolk, and later on another pair, but I find these Ducks shy, and much more difficult to keep alive than Pintails. In Hunt's time (1815), the Gadwall was called "a Rodge," probably signifying an eater of aquatic roots (*cf.* Harting, Zool. 1882, p. 296).

15th. A Great Snipe was shot at Reedham (G. Smith), and a Little Gull at Cley (Pashley); two other Little Gulls were seen at Cley, and a Shag killed (G. E. Power).

16th. Lapland Bunting at Cley (Power). Others seen afterwards by Mr. W. H. Dobie.

17th. Little Auk at Cley (Power).

19th. Fulmar Petrel washed up at Yarmouth (Patterson), and another about the same time at Cley (W. H. Dobie).

On the 24th I noticed the barometer very low, and the 25th was as cold a day as I ever experienced, when standing shivering outside a covert; in spite of which, Mr. Pashley informs me, a dull-plumaged female Roller was shot, either on this day or a few days before, at Barton; but the Roller, though tropical in appearance, has a high northern range. A walk with my gun convinced me that birds were on the move. Mr. Patterson, from his station at Yarmouth, observed Rooks, Jackdaws, and Starlings flying south in continuous flocks; and a Sea Eagle was seen by several people at Northrepps, mobbed by about forty Rooks, which gradually drove it out to sea. Two large flocks of Long-tailed Ducks were viewed at sea by Mr. Dobie swimming westwards; and a Black-bellied Dipper, *Cinclus melanogaster*, a bird which the late Mr. Stevenson associated with severe weather, was shot at the back of Aylsham watermill, as I learn from Mr. Southwell, who adds that its gizzard contained elytra of the Whirleygig Beetle (*Gyrinus*). It was afterwards presented to the museum, when I had an opportunity of noting that the whole of the white breast was suffused with specks of brown, doubtless the last indication of immaturity. There was not a tint of chestnut on the under parts. This interesting species is now reckoned almost an annual visitant to Norfolk, whereas the typical British *C. aquaticus* has occurred but twice in the county.

27th. Redwings and Fieldfares were observed coming in flocks straight over the sea (Dobie).

NOVEMBER.

5th. A Fulmar Petrel at Yarmouth (G. Smith).

19th. A Peregrine seen near Wells (Col. Feilden).

20th. A Spotted Redshank was shot at Barton.

26th. A Black Redstart at Cley (Ramm).

28th. A Green Sandpiper, *Totanus ochropus*, at Surlingham.

29th. Two Slavonian Grebes shot on the Bure (G. Smith).

DECEMBER.

4th. A Sea Eagle was killed at Shottesham (J. A. Cole), possibly the same which had been seen at Northrepps and afterwards at Hemsby.

11th. A Richard's Pipit was caught at Caistor, as I am informed by Mr. G. Smith, at whose house it was at the time of writing, thriving on mealworms. It, however, soon died, and was presented by Lord Lilford to the Norwich Museum.

14th. A male Salmon 36 in. long and weighing $13\frac{1}{2}$ lbs. was taken in an eel-trap at Keswick mill, where no one ever recollected a fish of this species having been seen before; indeed, its appearance in any Norfolk rivers is very rare, and this one must have passed through three mills—Trowse, Lakenham, and Keswick—which seems extraordinary.

On bringing these Norfolk Notes to a conclusion, I should like to make an apology. If I was the person who gave Mr. Howard Saunders the information that as recently as 1840 there were Guillemots on Cromer cliffs (*vide* Yarrell, *Brit. Birds*, iv. p. 70), though my name is not mentioned, I can only say that I am sorry I was so incautious. There is no reason for supposing that Guillemots ever bred at Cromer, and assuredly not so lately as 1840. The cliffs, as Mr. Southwell has pointed out, are too friable and sandy, with hard clay in places, but quite devoid of rocky ledges such as Guillemots love to haunt. The excuse for the mistake lies in the misapprehension of the meaning of the name "Foulness," applied in maps to this headland of our coast. In the opinion of Mr. W. Rye, the well-known antiquary, it does not mean "Birds' headland," as I incorrectly supposed, but a foul or dangerous place where good ships may come to grief.

NOTES AND QUERIES.

MAMMALIA.

The Lesser Shrew.—The Lesser Shrew, *Sorex minutus*, is perhaps the least known of the smaller British quadrupeds. Its wide distribution throughout the British Isles was known to Bell; and Mr. de Winton informs me that he has specimens from England, Scotland, Ireland, and the Hebrides. Dr. Sharff, of Dublin, tells me that *S. minutus* is common in Ireland, while *araneus* is entirely absent. This is an interesting fact, and the perusal of a very interesting paper by him on "The Origin of the Irish Land and Freshwater Fauna," leads one to infer that *Sorex minutus* was an earlier inhabitant of Britain than *araneus*, and penetrated into Ireland before the severance of that island from Britain, and before *araneus* had arrived here. The comparative scarcity of *minutus* in Britain is also interesting in this connection. Did the larger *araneus* come over and wage war with its smaller relative, and so diminish its numbers in the same way that *Mus decumanus* has done with *Mus rattus*? So far as my limited experience goes, both Shrews make use of the same runs.—LIONEL E. ADAMS (Northampton).

Yellow-tailed Squirrels.—I understand that some investigations on the subject of Squirrels' tails becoming yellow or straw-coloured are on foot. Perhaps it may interest those curious in the matter to hear that early in January of this year I observed six Squirrels busily engaged hunting for beech-mast under some beeches near my windows, and that *four* of them had tails of a more or less yellow hue, the other two being of the ordinary colour. Later on in the spring the tails of most if not all our Squirrels here become yellow or yellowish white.—O. P. CAMBRIDGE (Bloxworth Rectory, Dorset).

The Editor having shown me this letter of Mr. Cambridge, I may state that, thanks to the kindness of Mr. J. C. Mansel-Pleydell, the British Museum has received a fine series of Squirrels, killed at intervals of a few weeks all through the year, from Whatcombe, near Blandford, Dorset, the same district from which Mr. Cambridge writes. These clearly show that about November the tail grows a new and rich coat of brown or even nearly black hairs, and that these begin to bleach almost at once, passing through all the shades of colour from dark brown, by dull brown, yellowish brown, yellow to yellowish white, or even clear white, so that August and September specimens have normally white tails. But as the bleaching of the hairs goes on most irregularly in different individuals, the four out of six January specimens mentioned by Mr. Cambridge with tails of a "more or less yellow hue" are perfectly natural and in accordance with what is shown by Mr. Mansel-Pleydell's series. Any specimens presenting a condition

inconsistent with the rule, such as white-tailed individuals killed in November or December, or dark brown or black-tailed ones procured in August, or, again, *any* red-tailed ones, would be acceptable additions to the series in the British Museum. This series, it is hoped, will be worked out shortly, not only as regards the variation in the colour of the tails, but also as to the growth and colour-change in the fur generally, and as to the development, bleaching, and shedding of the ear-tufts. — OLDFIELD THOMAS (Natural History Museum).

The Names of the Mole.—With reference to Mr. H. Raeburn's note, on p. 64, on this subject, it would be interesting to learn in what part (or parts) of Denmark the name *Marsvin* is applied to this animal, as it usually means a Porpoise; though I see by both the Dano-Norwegian and Swedish dictionaries that it is also used for a Guinea-pig. Again, is it certain that the first syllable is derived from the word signifying Elf or "Nightmare"? is it not rather from the word which is, I believe, both Old Norse and modern Icelandic, meaning sea? Compare the French *Marsuin*, which Rolland ('Faune populaire de la France') derives from Old High German *Mérisuin*; modern German *Meerschwein*; Russian *Morskaja swinja* (pronounce *j* as English *y*), all meaning Sea-pig; while the same idea appears in the Spanish *Puerco marino*. The Mole does not occur in Norway, nor (according to Lilljeborg, 'Sveriges och Norges Rygggradsdjur') further north in Sweden than Södermanland. The Danish name for a Mole is *Muldvarp*; *Muldvarpe*, as quoted by Mr. Raeburn, is the plural. The Swedish word is *Mullvad*, which agrees as to its last syllable with the Scotch form; and it should be remembered that the Swedish language, as now used, is much nearer Old Norse than the Dano-Norwegian. — ALFRED HENEAGE COCKS (Great Marlow, Bucks).

Irish Hare turning White in Winter.—At p. 266 of 'Science Gossip' for February last, in Dr. Scharff's interesting sketch of the fauna and flora of Ireland, it is stated that "in Ireland the Arctic or Mountain Hare does not change its dress to white as it does in cold countries, but remains in its brown summer hue throughout the winter." I do not know on what grounds Dr. Scharff has been led to make this statement, for, so far as my experience goes in County Down, it is quite incorrect. At Finnebrogue, near Downpatrick, a very large number of Hares are taken or killed every year, and it is found that a considerable number of these turn very white in the winter, while nearly all assume a much lighter shade of fur when the cold weather sets in. The Irish Hare is considered to be exceptionally strong and suited for coursing purposes, and a large number are exported annually to England and Scotland for various coursing meetings. — W. E. WARRAND, Major-General R.E. (Harold Road, Margate).

[In the recently published volume by Mr. Lydekker on 'British Mammalia,' in Allen's Naturalists' Library, the same mistake is made. It

is there stated (pp. 226, 227) that "in Ireland, doubtless owing to the mild climate, the Mountain Hare does not turn white in winter." This error was doubtless copied from Bell's 'British Quadrupeds,' notwithstanding that we pointed out the fallacy of it twenty years ago, on the appearance of the second edition of that work. Since then we have not only received the assurance of several sportsmen and good observers in Ireland that Bell was mistaken in his assertion, but we have had ocular demonstration of the fact by shooting several Irish Hares, and seeing others shot by friends, in all stages of change from brown to white.—ED.]

The Black Rat in London.—As the occurrence of the old English Black Rat, *Mus rattus*, is becoming less frequent every year, it may be of interest to note that a young one, a female, was caught on the business premises of Messrs. S. E. Norris and Co., at Shadwell, East London, in February last. During the same week that this specimen was trapped, several Brown Rats, *Mus decumanus*, were caught in the same part of the building.—A. D. LAPSWORTH (Woodford Green).

CETACEA.

Food of the Dolphin.—In Sept. 1893, the men on board the Prince of Monaco's yacht lying off Corsica captured a Dolphin, which on being hauled on board was opened and the contents of the stomach immediately placed in alcohol. Subsequent examination by Prof. L. Joubin, of Rennes, showed that at the time of its capture this Dolphin had just made a large meal of cephalopods. Many of them were so little injured that there was no difficulty in determining the species, and the following were recognised:—*Enoploteuthis margaritifera*, Rüppell (four specimens), *Chiroteuthis veranyi*, d'Orbigny (three specimens), *Loligo vulgaris*, Lamarck, *Todarodes sagittatus*, Steenstrup, *Onychoteuthis lichtensteini*, Férussac, *Heteroteuthis dispar*, Gray (?), and three examples of a new species which Prof. Joubin has described and figured (Bull. Soc. Zool. France, tome xix. 1894, p. 64) under the name of *Ctenopteryx cyprinoides*, and which appears to be allied to *Ctenopteryx fimbriatus*, described by the Norwegian zoologist Appelöf. The particular species of Dolphin is not mentioned, but we may assume from the name *Dauphin* applied to it that it was the common *Delphinus delphis*, Linn., which is not only plentiful in the Mediterranean, but comes into our own waters. On the Cornish coast especially it sometimes appears in considerable numbers, and is frequently taken in the fishermen's nets. An examination of some of these, according to Couch, has proved that the food of this cetacean is not confined to cuttle-fish and crustacea, but that Pilchards, Mackerel, and other fish are also habitually taken.—J. E. HARTING.

BIRDS.

Local Names of Wildfowl.—Can any correspondent say what are the modern names of the wildfowl formerly termed *pellstarts* and *smeathes*? I have lately been writing the history of Cheadle, in Cheshire, and in the diary of Sir Wm. Brereton, the Parliamentary General, there are particulars given of his 'coy (or decoy) at Handford Hall, his home, and the "shovelars, teal, wigeon, *pellstarts*, and *smeathes*" that were taken there. The names probably refer to Pintails and Smews; but would they ever be common birds inland in Cheshire? Handford or Handforth Hall is ten miles south of Manchester, a beautiful old black and white house, with good staircase, and a wonderfully inscribed porch of black oak dated 1562, erected by Wigan Brereton, who married the heiress of the last of the Handfords (who fell at Flodden), and who had been married and divorced from Sir John Stanley, who also fought at Flodden. The site of the "decoy" is now a reservoir for a calico-printing works, and ducks are accordingly scarce.—FLETCHER Moss (The Old Parsonage, Didsbury).

[The word *pell*, diminutive of *pool*, means a broad shallow piece of water, larger than a pond and smaller than a lake, A. S. *pól*, British *pwl*. In Dutch it is *poel*, in German *pfahl*, Latin *palus*. *Pell* is in use in Sussex, and signifies just such a place as wildfowl love to haunt. In Herefordshire a *pill* is a small creek, which in Wales is called *pil*. This word is used on the Severn, but occurs elsewhere in Celtic districts as a proper name. For example, in Cornwall, on the Falmouth river, there is a village named *Pill*. In Ireland also there is *Pilltown* in Co. Kilkenny, situate on a creek of the Suir called the *Pill*, and *Pilltown* on the Blackwater, Co. Waterford. But however suggestive this may be of wildfowl and their haunts, can this word after all have anything to do with *pell* in *pellstart*? *Start*, of course, is the A. S. *steort*, tail, seen in "Redstart," and "Clubster," a local name for the Stoat; but *pellstart*, if from A. S. *pól steort*, can have no intelligible signification. It is more likely that the word is a corruption of "pile-start," *pile* signifying an arrow, dart, or javelin. In this sense it would be applicable enough to the Pintail, *Dafila acuta*. It would be interesting to know whether *pellstart* or *pilestart* is still in use in any part of the country. We have not found it in any of the Glossaries, ten or a dozen, to which we have referred. *Smeath*, on the other hand, is given in several for the Smew, *Mergus albellus*, which, from its piscivorous habits, is not at all likely to be decoyed, though it might be taken in a decoy by accident.—ED.]

Notes on Grouse.—I have to thank Mr. Macpherson for his "explanation," though it hardly seems to explain much. As I never saw my uncle's bird described in print as a hybrid until I read the allusion to it in the volume on the Grouse in Longman's "Fur and Feather" Series, I can hardly have concurred in any "original records." I am informed by

Mr. Suchetet, of Rouen, that he knows of ten or eleven more or less authenticated cases of hybridism between the Red Grouse and Black-game (but this is not one of them), one an undoubted example, bred in captivity. As to the migrations of the Red Grouse, if Mr. Macpherson has been "often asked to investigate" such phenomena, but has not done so, by what process did he arrive at the opinion which he has expressed in the volume on 'The Grouse,' that this bird does not migrate at all? Almost every one in Alston knows of the regular appearance of the "Yorkshire birds," as most people know of the arrival of the Swallows. And if Mr. Macpherson would either pass a few days in Alston twice or thrice during the season, and examine the birds sent in to the dealers, or would go up with the owners or lessees of a few of the moors about there twice or thrice in the season, and examine and weigh the birds killed at different periods, he would certainly be in a position to give us some exact information of the highest interest, without having recourse to tin labels, to which there is likely to be considerable objection. I am tempted to add a brief account of the movements of the birds on my uncle's moor at Alston. There are two types of birds which breed there. The low-ground cocks are a little over average size, and weigh about 26 oz.; are very red-coloured, with but little black ground colour on the under parts, and that chiefly confined to the lower belly; have hardly any white tips; the white moustache hardly visible. The hens are very handsome, dark, boldly marked, with large golden spots (tips) on the back; weight about 23 oz. On higher ground the larger "fell-top birds" are met with, weighing (cocks) 28-30 oz.; much blacker in ground colour, and with a great deal of white on the throat, wings, and under parts generally; the hens about 24 oz., dark, and a good deal ticked with white. In the earlier part of the season these are the two types met with, the former on the low ground, the latter on the hill-tops and rockier ground. But after the end of October—or a little later according to the season—the first or low-ground type seems to vanish mostly, probably to fells lower down (but as to this I know nothing for certain), while the fell-top birds descend to take their place. In addition a very large number of smaller Grouse appear, in big packs, all, or nearly all, females. I cannot say that I have ever handled a male. These are well known in the neighbourhood as "Yorkshire birds," and are believed to come from the Duke of Cleveland's Yorkshire moors, some twenty miles off. They are much lighter in colour than the native hens, so much so that they are readily recognised on the wing. They are very yellow in tint, very "speckly"—that is, the markings are, by comparison, much less bold, and the contrast of colours much less striking than in the other two types. The two which I have as skins weighed, when freshly shot, 19 oz. and 20½ oz. respectively. I should say that the former, or a trifle more, is about the average weight—that is to say, some three ounces

less than the hens scale which are shot earlier in the season, a very substantial difference. These last stay till towards the pairing season, and then are seen no more till late autumn. Apart from the weights, which speak for themselves, the three types are distinguishable at a glance by their plumage.—HENRY H. SLATER.

Migration of Grouse in Winter.—In our last number (p. 69) we printed the reports of several correspondents, showing the severe straits to which the Red Grouse have been reduced upon the north country moors by reason of the severe cold and heavy snow, which have prevented them from getting their usual food, and driven them down to the valleys in search of sustenance. A correspondent of 'The Field,' writing from North Yorkshire on Feb. 12th, observes:—"In the North Riding the storm continues with unabated severity, and both winged and ground game are suffering. On the moor the snow lies very deep, many of the smaller 'ghylls' being completely overblown. The Grouse have forsaken the higher moors, where it is impossible for them to be artificially fed, and have congregated on the lower ground, where, by means of snow harrows, and holes dug through the snow, they are enabled to reach the heather. On most moors, where practicable, they have been and are daily fed with unthrashed corn. Numbers of Grouse, however, are scattered all over the lower valleys, and may be seen literally in hundreds perched in the hedgerows, feeding on the hawthorn berries and haws of the brier, and other wild seeds. It is a pitiable sight to see the straits to which these—our gamest of game-birds—are reduced; they are so tamed by want of food as to be heedless of the approach of man, and could easily be knocked down with a stick. Scores have succumbed, but in many cases these have been 'pricked' birds, and in some instances birds suffering from tapeworm. All the weakly birds must be killed by the intense cold and lack of food, and numbers will doubtless fall victims to unscrupulous persons. The partial thaw, succeeded by a severe frost, rendered it impossible for the birds to get through the frozen surface to reach their natural food, and this frost was followed by another thick covering of snow. Undoubtedly, good will ensue to a limited extent by the change of blood, and on the overstocked moors disease may be averted. Not within the memory of man have so many Grouse been seen feeding in hedgerows or amongst the sheep and in farmyards as at present. Partridges also have suffered, and whole coveys have been found frozen stiff where jugging. In most cases Partridges are able to eke out a subsistence by feeding in the hedge bottoms, roads, and farm or stack-yards, but the bitter cold of the present storm has caused great destruction. Rooks and Carrion Crows have been seen feeding on emaciated, starved birds and rabbits. Pheasants are, as a rule, well looked after and hand-fed, but in distant and unpreserved coverts the wild birds are being exterminated. Foxes are plentiful, and their pad-marks can be seen in all directions in the

snow, and doubtless they also have proved destructive to game. Snipe have apparently deserted us, and comparatively few wildfowl have been seen inland. Hares and rabbits are perishing in scores, dead bodies, frozen stiff, being frequently seen. In the hedgerows and plantations most of the lower branches and stems of the trees have been peeled by the rabbits, which seem especially partial to holly, ash, and hazel, the black-thorn escaping to a great extent. The hill farmers are put to great straits for want of hay, and the difficulty of transporting it, many of the roads being snow-blocked."

Brünnich's Guillemot in Cambridgeshire.—With reference to the Guillemot alluded to in your editorial note (p. 70) as announced by the Rev. Julian Tuck, I beg to inform you that this gentleman has been kind enough to send me the specimen in question, stuffed, for inspection. I had little doubt at first sight as to its species, but as I have a very slight acquaintance with this family of birds, I obtained Mr. Tuck's permission to send his bird for the opinion of Professor Alfred Newton, who, after comparing it with specimens in the Cambridge University Museum, wrote to me that (in his opinion) there could be no doubt that the bird is Brünnich's Guillemot. I may add that through the courtesy of Mr. W. J. Clarke and Mr. Oxley Grabham, I have also seen the Scarborough and Filey specimens, recorded *loc. supra cit.* and that an examination of these confirms (were any confirmation needed) Professor Newton's opinion with regard to the subject of this note.—LILFORD (Lilford Hall, Oundle).

[It is satisfactory to have all doubt removed by this communication, for which we are much obliged, and it only remains to add that the Cambridgeshire specimen of Brünnich's Guillemot here referred to was obtained at Guyhirne, on the Nene, Cambridgeshire, about the 12th January last. It was received in the flesh by Mr. Travis, taxidermist, of Bury, from whom it was subsequently purchased by Mr. Tuck.—ED.]

Sea Gulls in London:—During the continuance of the severe frost in January and February hundreds of Sea Gulls frequented the Thames in the very heart of London, attracted apparently by the open water which was kept from freezing by the tide. Here they remained for many weeks, hovering round the bridges, from which the bystanders threw them pieces of bread, biscuit, and other food, or resting on the moored barges and blocks of floating ice. At Blackfriars Bridge they were especially numerous, and between that and Westminster Bridge they were daily to be seen in hundreds. From Westminster some of them made daily excursions to the water in St. James's Park, where they would alight to share the food thrown to the Ducks and semi-domesticated pinioned Gulls, which perhaps served as decoys. Amongst the flocks which visited the metropolis, by far the greater number were Black-headed Gulls in the ordinary winter plumage,

that is without black heads, and many of them immature, as might be seen by their mottled backs and the broad dark bar across the extremity of the tail. But in addition to these were many Kittiwakes, a few Common Gulls, Herring Gulls, and now and then an immature Black-backed Gull. On one occasion (Feb. 15th) I had a close view of a Little Gull, *Larus minutus*, as it passed along the Thames Embankment at Charing Cross, within a yard or two of where I stood feeding some of the Black-headed species. Londoners are accustomed to see a few Gulls on the river from time to time, as well as on the water in the parks during the period of migration in spring and autumn, but the unusual numbers of these birds which made their appearance in the middle of January was so extraordinary as to attract universal attention.—J. E. HARTING.

Hybrid Finches at the Crystal Palace Bird Show.—The most interesting hybrid exhibited at the late Crystal Palace Bird Show was a cross between the Greenfinch and Bullfinch—a large handsome bird with a greyish back and dull reddish yellow breast and upper tail coverts. In the same class was a Siskin and Redpoll hybrid, and several examples of the commoner crosses between the Goldfinch and Linnet and the Bullfinch and Goldfinch; one variety with a white head, which was undescribed in the catalogue, was evidently an example of the latter. Altogether eleven birds were exhibited in this class, exclusive of a Reed Bunting, which for some unknown reason was allowed a place in it. Two very nice Redstarts and some beautiful Bearded Tits were on view, and the variety class included a Goldfinch with a black instead of a crimson face.—A. HOLTE MACPHERSON.

Two-barred Crossbill in the West of England and Ireland.—A letter from Mr. Maxwell, of Keynsham, Somerset, announces the fact of his having shot a red Crossbill with two white bars across the wing, one of a little flock that visited a wood in his neighbourhood during the last week of February. Another is reported from the Co. Fermanagh, by Mr. Charles Langham, of Tempo Manor, Enniskillen, who writes on Feb. 23rd :—"I have had a stroke of luck since I last wrote to you. Wishing to obtain some Crossbills for my collection, I shot a few, one of which is *Loxia bifasciata*. My bird-stuffer, who has had over sixty years' experience, is positive that it is the European Two-barred Crossbill, and not the American white-winged species." We have no reason to doubt the correctness of the identification, and those of our correspondents who are being visited by Crossbills this winter would do well to keep a look-out for the rarer two-barred species that may be in their company.—Ed.

Shearwaters in Carnarvonshire.—It is not at all unlikely that the dead Shearwaters found in Carnarvonshire by Mr. T. A. Coward (p. 72) may have been dashed by the force of the wind against the cliffs, on misty nights, and killed. When at the Scilly Islands, I found a good many of

these birds which had evidently met their death in this way, and I think most of them had broken necks like those found by Mr. Coward.—J. H. GURNEY (Keswick, Norwich).

Stone Curlew in Lincolnshire in Winter.—A specimen of the Stone Curlew (*Edicnemus*) was shot by a labourer in the parish of Marsh Chapel, on the 30th January last. It was in good condition, in spite of the extreme severity of the weather.—G. H. CATON HAIGH (Grainsby Hall, Great Grimsby, Lincolnshire).

Waxwing in Leicestershire.—A specimen of this bird was shot near the village of Loughton, in this county, on Feb. 13th. I did not hear of its occurrence before the bird had been sent for preservation to a bird-stuffer in Leicester, and am therefore unable to state any particulars as to its sex, or food.—A. MATTHEWS (Gumley, Market Harborough).

Blackbird marked like Ring Ouzel.—In 'The Zoologist' for 1893, p. 189, is a notice of an old male Blackbird marked with a well-defined crescent-shaped patch at the upper part of the breast near the throat. I have seen this bird constantly here ever since, until the beginning of the present year 1895, and the pale marking had increased in distinctness. I fear that some mischance has happened to this bird, as it has not been visible among the numerous birds of many kinds coming daily to be fed on my lawn during the long severe past frost; there is, however, in its place, a hen Blackbird marked exactly in the same way. She has been about here since last summer.—O. P. CAMBRIDGE (Bloxworth Rectory, Dorset).

Gray-lag Geese breeding in Nottinghamshire.—The Grey-lag Geese, *Anser ferus*, come to our shooting-quarters in Norway on or about April 1st, and generally speaking have laid and are sitting by May 1st. The eggs from which my geese at Annesley were reared were taken during the last week in April, 1889, and I myself set them under hens. They took twenty-eight days hatching, and the young were very easily reared. In March, 1894, they all took their departure, and when I returned from Scotland I discovered two of them sitting on the island in the pond, about half-a-mile away. They each in due time hatched four young ones, and they are all now well and strong. I have never got them to cross with the tame geese, although they are always together. I have seen them crossed in Scotland, but mine never do so, although they have every opportunity, as for some years I had a wild gander alone with tame geese, and I also had a wild goose for several years alone with my tame geese. I consider that the Scotch wild Gray-lag differs somewhat from the Norwegian bird, though not to any great extent. Two facts strike me as curious, namely, that they laid their eggs and were sitting a month earlier than they would have done

in Norway, and also that one gander paired with two geese, which is quite opposed to what happens in a wild state, for they then pair and the gander keeps with the goose the whole time she is sitting, and guards the brood until they all take their departure at the end of September. Another fact I should like to mention, and that is, Grey-lag Geese do not lay the number of eggs that is commonly supposed. Six is the largest number that I have ever seen; four and five the usual number. I have heard of seven, but have never seen so many, and I have had considerable experience in this respect.—P. MUSTERS (Annesley Park, Notts).

REPTILIA.

On the Habits of *Macropisthodon rhodomelas*.—The little harmless *Macropisthodon rhodomelas*, Boulenger, is one of the commonest Snakes in Singapore, and may often be seen creeping about in the grass in the Botanic Gardens, in the early morning and evening. It is very conspicuous with its brick-red head and body and slaty-blue belly. On the nape is a black V-shaped mark, edged with blue, and a black line runs down the back. When attacked, and unable to escape, it sits up like a Cobra, spreading out the skin on either side of its neck, and arching forwards its head. This imitation of a Cobra might of itself deter enemies from approaching it, but the reptile has a further protection, which I think has not been hitherto recorded. When sitting up, Cobra-wise, it exudes from a point on its neck just above the black mark, a number of drops of a thick white liquid, in the position of the skull-like markings of the Cobra. A Terrier attacking this Snake naturally bit and shook it by the most prominent portion, namely, the arched neck; and though he killed it, the glandular exudation made him foam at the mouth for a considerable time, and he was evidently very uncomfortable. The action on the mucous membrane of the mouth was exactly like that produced by the acrid secretion of a common Toad here, *Bufo melanostictus*, which no dog will touch twice. I captured one of these Snakes and tasted the milky exudation, but though it was bitter and unpleasant, it did not produce the action on my salivary glands that it does on those of the dog. I do not remember to have heard of any other Snake which repels its enemies by its distastefulness; and the boldness with which this Snake moves about in open, exposed spots, is probably due to the possession of this form of defence. I should add, that as all the Cobras in the south of the Malay Peninsula are entirely black, and the only other hooded Snake, *Ophiophagus*, does not much resemble *Macropisthodon* in colouring, so that though the latter may be taken for a poisonous hooded Snake under some circumstances, the resemblance is probably hardly sufficiently close to deceive the sharp-eyed Serpent-Eagles which are always on the watch for prey.—H. N. RIDLEY (Singapore).

SCIENTIFIC SOCIETIES.

LINNEAN SOCIETY OF LONDON.

Feb. 7th.—Mr. C. B. CLARKE, F.R.S., President, in the chair.

Messrs. G. H. Adcock and J. R. Bovell were elected Fellows.

Mr. Thomas Christy exhibited a dried specimen of *Aplopappus Llarete*, and samples of the so-called Gum Kino, *Pterocarpus erinaceus*, of which some account was given by Mr. E. M. Holmes.

Mr. George Murray exhibited a number of lantern-slides of floating Algæ, of which he gave brief descriptions, referring to the localities in which they had been found, and the literature relating to them.

By permission of the Director of the Royal Gardens, Kew, Mr. W. B. Hemsley exhibited dried specimens of a number of new plants from Eastern Asia.

Mr. Thomas Hanbury exhibited a beautiful collection of fresh fruits of the *Aurantiaceæ*, grown in his own garden at La Mortola, Mentone, and gave an account of some of the more remarkable varieties, their mode of growth, and the conditions under which they had been grown.

A paper was then read by Mr. H. M. Bernard "On the Comparative Morphology of the *Galeodidæ*." Having described a possible origin for the Crustacea from a chætopod annelid by an adaptation of the anterior segments to a method of feeding, whereby the parapodia could function as jaws, the author attempted the same for the Arachnida, with a view to solve the question of their relationship with the Merostomata. The *Galeodidæ* were chosen for special study because, unlike other Arachnids, they have retained some segments of the cephalothorax as free movable segments, and hence might be expected to throw light on the subject. The author believed that he had solved the question of the primitive specialization of the Arachnid phylum from their annelidan ancestors, and expressed the opinion that as Arthropods they are not related either to the Crustacea (including *Limulus*) or to the Hexapoda; but that all these are distinct derivations of the Annelidæ. In an interesting discussion which followed, the paper was criticised at some length by Mr. A. D. Michael, Prof. Howes, and Mr. R. I. Pocock.

Feb. 21st.—Mr. C. B. CLARKE, F.R.S., President, in the chair.

Mr. Robert Okell was admitted a Fellow.

Mr. J. H. Vanstone exhibited specimens of some nearly allied Hydrozoa, namely, *Bougainvillea ramosa* and *B. musca*, and after demonstrating their structure, gave reasons for concluding that although the latter had been described as distinct by Prof. Allman, the characters relied upon were not of specific value, but simply varietal.

Mr. George Brebner exhibited some lantern-slides of *Gloeosiphonia capillaris* and other Algæ, with accompanying descriptions, and gave an interesting account of his method of preparing slides in colours.

On behalf of Mr. J. Boerlage, the President demonstrated the chief points in a paper communicated by him on the identification of *Chionanthus Ghaeri*, an obscure species figured by Gaertner at the end of the last century, in his famous work 'De Fructibus et Seminibus Plantarum,' but hitherto undetermined. From the researches of Mr. Boerlage it now appeared that it was evidently referable to *Scirpodendron costatum*, Kurz. This was made clear by the excellent drawings which accompanied the paper as well as by the specimens which were exhibited.

A paper was then read by Mr. E. M. Holmes on new marine Algæ from Japan. The author pointed out that up to the present time the known species of Algæ from that country did not exceed 300, or about half the number found in Great Britain; but that the districts around three centres only had been explored, namely, Hakodadi, Tokio, and Nagasaki, notwithstanding the fact that sea-weeds are largely used as food by the Japanese, and form an important article of commerce. The paper included descriptions of twenty-three new species, the structure of which was shown by means of the oxyhydrogen lantern.

ZOOLOGICAL SOCIETY OF LONDON.

Feb. 5th.—Sir W. H. FLOWER, K.C.B., LL.D., F.R.S., President, in the chair.

The Secretary read a report on the additions that had been made to the Society's Menagerie during the month of January, 1895.

Mr. Holding exhibited and made remarks on the skull of a Three-horned Stag, the head of a Four-horned Ram, and the gnawed horn of a Red Deer.

A communication was read from Dr. E. A. Goeldi, in which he described the breeding habits of some Tree-Frogs observed by him in the Province Rio Janeiro:—*Hyla faber*, Wied, constructs nests of mud on the shallow borders of ponds, wherein the young are protected from enemies whilst in the larval state. *Hyla goeldii*, Boulenger, dispenses with the metamorphoses, which are hurried through within the eggs, these being carried by the female on her back. *Hyla nebulosa*, Spix, deposits its eggs in a slimy mass attached to withered banana-leaves, the young remaining in this sort of nest until in the perfect, air-breathing condition.

Mr. Edgar A. Smith gave an account of a collection of Land-Shells made principally by Mr. A. Everett at Sarawak, British North Borneo, Palawan, and other neighbouring islands.

Mr. Oldfield Thomas read a paper upon the long-lost mammal, *Putorius africanus*, Desm., and its occurrence in Malta.

Mr. F. E. Beddard read a paper on the visceral anatomy of the Tree-Kangaroo, *Dendrolagus bennettii*, and pointed out the structure of the brain and other organs.

Feb. 19th.—Sir W. H. FLOWER, K.C.B., LL.D., F.R.S., President, in the chair.

A report was read, drawn up by Mr. A. Thomson, the Society's Head-Keeper, on the insects bred in the Insect House during the past season.

Mr. F. E. Beddard read a paper in which he gave a description of the brain of the Glutton, *Gulo luscus*. A second paper by Mr. Beddard contained a description of the brain of different species of Lemurs that have died in the Society's Gardens, pointing out the range of variation to be observed in the cerebral convolutions of this order.

A communication was read from Mr. C. Davies Sherborn and Dr. F. A. Jentink, in which were given the dates of the publication of the parts of Siebold's 'Fauna Japonica' and Giebel's 'Allgemeine Zoologie' (first ed.).

A communication was read, from Dr. J. de Bedriaga, "On the Pyrenean Newt, *Molge aspera*, Dugès," dealing with the external, osteological, and larval characters of this imperfectly-known Batrachian, and giving an account of its habits.—P. L. SCLATER, *Secretary*.

ENTOMOLOGICAL SOCIETY OF LONDON.

February 6th, 1895.—Professor RAPHAEL MELDOLA, F.R.S., President, in the chair.

The President announced that he had nominated the Right Hon. Lord Walsingham, F.R.S., Mr. Henry John Elwes, F.L.S., and Prof. Edward B. Poulton, F.R.S., Vice-Presidents of the Society for the Session 1895-96.

Mr. Charles Nicholson was elected a Fellow.

Mr. W. F. H. Blandford made some remarks regarding M. Brongniart's donation to the library of his monograph entitled "Recherches pour servir à l'Histoire des Insectes Fossiles des Temps Primaires." Mr. Blandford also called attention to figures of pupæ of species of *Spalgis* (Lycænidæ) in the 'Journal of the Bombay Natural History Society.'

Canon Fowler exhibited, on behalf of Mr. C. A. Myers, an unusually fine specimen of *Spharia robertsi*, growing from the prothorax of an under-larva of an *Hepialus*, supposed to be *H. virescens*, from New Zealand. Mr. McLachlan said that there was a doubt whether the caterpillar should be referred to this species. Mr. Blandford stated that the French Government had set aside a section of the Pasteur Institute at Paris for the study of entomophagous fungi.

Prof. L. C. Miall and Mr. N. Walker communicated a paper "On the life-history of *Pericoma canescens* (Psychodidæ)," with an Appendix by Baron Osten-Sacken.

Herr Jacoby read a paper entitled "Contributions to our knowledge of African Phytophagous Coleoptera." Dr. D. Sharp remarked that Erichsen began the 'Insekten Deutschlands' some sixteen years ago, and as he was engaged on a classification of the Coleoptera of the world, he included a considerable number of these exotic species in his work.

Mr. G. F. Hampson read a paper entitled "Descriptions of new Heterocera from India."—W. W. FOWLER, *Hon. Secretary*.

Feb. 20th.—Professor RAPHAEL MELDOLA, F.R.S., President, in the chair.

Mr. W. M. Christy exhibited specimens of *Lycana agestis*, caught in Sussex last summer, which had a white edging round the black discoidal spot. He said the specimens might perhaps be identical with the northern form of the species known as the variety *salmacis*.

Mr. H. Goss exhibited a small collection of Lepidoptera from the South of France made by Mr. Frank Bromilow.

Professor Meldola invited discussion upon the address delivered by Mr. Elwes, as retiring President, on the Geographical Distribution of Butterflies, at the last Annual Meeting. He thought that the discussion might lead to a useful expression of opinion if the speakers would deal with the question as to how far the scheme of distribution advocated by Mr. Elwes was borne out by a comparison with other orders of insects. He was of opinion that in considering schemes of geographical distribution the results arrived at were likely to be of greater value the wider the basis on which they rested; and he therefore suggested a consideration of the question how far it was justifiable to draw conclusions from one division or one order only.

Dr. Sharp remarked that geographical distribution consisted of two divisions—firstly, the facts; secondly, the generalisations and deductions to be drawn from them. He thought that, as regards insects generally, our knowledge of the facts was not yet sufficient to warrant many generalisations. Still the impressions of those who have paid attention to particular groups of insects are even now of some importance, though at present based on incomplete knowledge. He thought the Rhopalocera would prove to be a somewhat exceptional group in their distribution. Notwithstanding that Australia and New Zealand are so poor in them, this was by no means the case with their Coleoptera, Australia being very rich, and its fauna of Coleoptera being very distinct. He thought that if Lepidoptera generally were well collected in Australia and New Zealand, it would be found that this order was not so poor in species as was supposed. He instanced the case of the Sandwich Islands, where it was supposed that there were very few species of Lepidoptera, and yet some five hundred species, or perhaps more, had been recently found there by Mr. R. C. L.

Perkins, who had been sent to investigate the islands by a committee appointed by the Royal Society and the British Association.

Mr. McLachlan was of opinion that no definite demarcation of regions existed, but that all the regions overlapped; in any case, the retention of Palæarctic and Næarctic as separate provinces was not warranted on entomological data. He thought that at the close of the glacial period some insects, instead of going north, were dispersed southwards, and that the present geographical distribution of some forms might thus be accounted for. The discussion was continued by Mr. Osbert Salvin, Mr. J. J. Walker, Herr Jacoby, Mr. Champion, Mr. Elwes, and Professor Meldola.

The Rev. T. A. Marshall communicated "A Monograph of British Braconidæ," Part VI.

Mr. J. W. Tutt read a paper entitled "An attempt to correlate the various Systems of Classification of the Lepidoptera recently proposed by various authors."—H. Goss, *Hon. Secretary*.

NOTICES OF NEW BOOKS.

The Life of Richard Owen. By his Grandson, the Rev. RICHARD OWEN, M.A. With the scientific portions revised by C. DAVIES SHERBORN. Also an Essay on Owen's position in Anatomical Science by the Right Hon. T. H. HUXLEY, F.R.S. With Portraits and Illustrations. 2 vols. 8vo. London: John Murray. 1894.

IN 'The Zoologist' for January, 1893, we gave a brief memoir of the distinguished naturalist who had then lately passed away, and whose 'Life' is now before us. In view of this notice there will be no need now either to repeat or amplify the biographical details already given, or to state facts which must be well known to the majority of our readers. Those of them who may take up the two volumes lately published by a grandson of the deceased will be well repaid by their perusal. In them they will find narrated the story of the early life and struggles of a young man aspiring to fame in the medical profession; his trials and troubles, overcome by sheer energy and fixity of purpose, and his gradual ascent of the ladder of fame culminating in his attainment of the highest position as an anatomist and palæontologist. Incidentally we see him at his daily work in the Museum of the Royal College of Surgeons, and

afterwards at the British Museum, and are introduced to his friends and fellow-workers, many of them distinguished men of science. Consulted by royalty and by the government of the day on various questions of reform, such as the supply of water to large towns, the improvement of slaughter-houses and meat-markets, &c., we find him sitting on various commissions and giving valuable and practical advice. The important services which he rendered as a Commissioner of the first International Exhibition in 1851 were duly appreciated by the late Prince Consort, and the public are now beginning to recognise the advantage which has resulted from the removal, which he advocated, of the Natural History collections in the British Museum from Bloomsbury to South Kensington.

The laborious task of cataloguing, in five volumes, the collections of John Hunter, and the large number of scientific memoirs which he published during fifty years of unremitting study and research, have resulted in a bequest to posterity of the most valuable and instructive kind.

By way of appendix to the second volume of this 'Life,' Prof. Huxley has written a very able criticism of Owen's position in the history of anatomical science, and we cannot do better than quote from it a few sentences in which he has given an opinion which no one is better qualified than himself to express. He says:—

"During more than half a century Owen's industry remained unabated; and whether we consider the quantity or the quality of the work done, or the wide range of his labours, I doubt if, in the long annals of anatomy, more is to be placed to the credit of any single worker."

After enumerating some of his most important memoirs, and showing in what particular respects they contributed to knowledge, he proceeds:—

"It is a splendid record; enough, and more than enough, to justify the high place in the scientific world which Owen so long occupied. If I mistake not, the historian of comparative anatomy and of palæontology will always assign to Owen a place next to, and hardly lower than, that of Cuvier, who was practically the creator of these sciences in their modern shape; and whose works must always remain models of excellence in their kind. It was not uncommon to hear our countryman called 'the British Cuvier,' and so far, in my judgment, the collocation was justified, high as the praise it implies."

As paving the way for this expression of opinion, Prof. Huxley has given us in these pages a most instructive sketch of the scope and course of modern biological science; of the condition of its several great divisions when Sir R. Owen commenced his career; and of the influence of his work upon the extraordinarily rapid advance of biology in the course of that time.

For this we are extremely grateful. It forms a fitting conclusion to a most interesting biography of one of whom all English naturalists may well be proud.

Allen's Naturalists' Library. Edited by R. B. SHARPE.—*A Handbook to the British Mammalia.* By R. LYDEKKER. Crown 8vo, pp. i-xiii; 1-340. London: W. H. Allen & Co. 1895.

IN his Preface to this volume Dr. Sharpe remarks upon the significant fact that at the present day no author pretends to write a complete account of his subject who does not take some notice of its palæontological aspect, and he considers himself fortunate in having secured the assistance of Mr. Lydekker in the preparation of this record of our British Mammalia past and present. As regards the "past," we may echo Dr. Sharpe's sentiment, but not as regards the "present"; for on the very next page we read, in the author's own words, the curious statement that he "makes no claim to being an observer of the habits of British mammals," though he undertakes to write about them, a remark which he subsequently justifies by the many mistakes into which he unwittingly falls.

We also learn from the Preface that Mr. Lydekker is not an advocate for the adoption of the *Scomber scomber* principle in zoological nomenclature. Dr. Sharpe "feels convinced, however, that the absolute justice of retaining every specific name given by Linnæus will some day be recognised." We venture to say that it is recognised now; but then, as we have already pointed out in 'The Zoologist' for December last, Linnæus did not bestow the specific name *Scomber* on the Mackerel, as alleged. A reference to the 10th edition of the 'Systema Naturæ' will show that what he did write was *Scomber scombrus*, and that by a typographical error in the 12th edition this was printed *Scomber scomber*, and

escaped detection until publication, when Linnæus, in his own handwriting, corrected it in his own copy of the work.

We are therefore quite unable to agree with Dr. Sharpe that "the correct title of the Badger should be *Meles meles*, of the Otter *Lutra lutra*, of the Roe Deer *Capreolus capreolus*," and so forth. At the same time we do not find that Mr. Lydekker has always hit upon the correct scientific appellation of some of the species. To take one example, Mr. Oldfield Thomas has lately shown reason for designating our Common Shrew *Sorex araneus*, Linn. (Zool. 1895, p. 62). With Mr. Lydekker it is *Sorex vulgaris* (p. 75).

But the chief fault we have to find with this new book on British Mammals is that it shows so little advance on the knowledge conveyed by the older text-books, except, we must admit, in regard to palæontology, which is Mr. Lydekker's strong point. Not only do we find a great deal borrowed from Macgillivray's little volume written fifty-seven years ago (much of which was doubtless correct enough at the time it was written), but statements are copied from Bell's work which have long since been shown to be erroneous. We are told that the Whiskered Bat appears to be unknown in Scotland, although at least three instances of its occurrence there are on record; that young Otters are born in March and April; that the Squirrel produces three or four young ones "about midsummer"; that the Irish Hare does not turn white in winter, and so on. We have noted numerous inaccurate statements with regard to the Chiroptera, and could fill a great many pages with corrections and criticisms of statements made regarding species belonging to other orders. We have no desire, however, to find fault, and we will therefore only express our disappointment at the contents of a book which, coming twenty years after Bell's second edition, might have been so much better than Mr. Lydekker has made it.

As for the plates, perhaps the less said the better. They not only possess no artistic merit, but many of them are quite inaccurate. It is to be regretted that Mr. Lydekker, as an instructor of the public in Zoology, did not prevail upon the publishers either to substitute better ones, or to dispense with plates altogether.

